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reopens Study

BRITISH MUSEUM (NATURAL HISTORY)

INSECTS OF SAMOA
AND OTHER SAMOAN TERRESTRIAL
ARTHROPODA

PART II. HEMIPTERA

FASC. 4. Pp. 163-194

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CICADELLIDAE (JASSIDAE)

By HERBERT OSBORN, Ohio State University,
Columbus, Ohio

WITH FIFTEEN TEXT-FIGURES



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INSECTS OF SAMOA

AND OTHER SAMOAN TERRESTRIAL ARTHROPODA

Although a monograph, or series of papers, dealing comprehensively with the land arthropod fauna of any group of islands in the South Pacific may be expected to yield valuable results, in connection with distribution, modification due to isolation, and other problems, no such work is at present in existence. In order in some measure to remedy this deficiency, and in view of benefits directly accruing to the National Collections, the Trustees of the British Museum have undertaken the publication of an account of the Insects and other Terrestrial Arthropoda collected in the Samoan Islands, in 1924-1925, by Messrs. P. A. Buxton and G. H. E. Hopkins, during the Expedition of the London School of Hygiene and Tropical Medicine to the South Pacific. Advantage has been taken of the opportunity thus afforded, to make the studies as complete as possible by including in them all Samoan material of the groups concerned in both the British Museum (Natural History) and (by courtesy of the authorities of that institution) the Bishop Museum, Honolulu.

It is not intended that contributors to the text shall be confined to the Museum Staff or to any one nation, but, so far as possible, the assistance of the leading authorities on all groups to be dealt with has been obtained.

The work is divided into nine "Parts" (see p. 3 of wrapper), of which the first eight are subdivided into "Fascicles." Each of the latter, which appear as ready in any order, consists of one or more contributions. On the completion of the systematic portion of the work it is intended to issue a general survey (Part IX), summarising the whole and drawing from it such conclusions as may be warranted.

A list of Fascicles already issued will be found on pp. 3 and 4 of this wrapper.

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Keeper of Entomology.

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CROMWELL ROAD, S.W.7.

INSECTS OF SAMOA

PART II. FASC. 4

HEMIPTERA—CICADELLIDAE (JASSIDAE)

By HERBERT OSBORN, Ohio State University, Columbus, Ohio

(With 15 Text-figures)

THE collection of Cicadellidae received includes collections made by Dr. P. A. Buxton and Mr. G. H. E. Hopkins in 1924-25, together with collections by O. H. Swezey and G. P. Wilder and E. H. Bryan. It represents the largest series known from this group of islands and is of special interest in comparison with the Fiji, Society and Marquesas groups and their possible affinities with Oriental or Malayan species, and also with the Hawaiian Islands to the north. All these groups of islands have had a long isolation, with evidently abundant time and opportunity, so far as food plants and other ecological factors are concerned, for the formation of species or varieties from what must have been early introductions from more fully populated regions. While it would be intensely interesting to attempt the tracing of affinities and lines of migration it is plain that this would involve much pure speculation and, with the material at present available, so little of certainty that this had best be left for future students. To the extent that we have species occurring in adjacent territory or for which there may be evident affinities, we can make suggestions in connection with particular species. In a general way we can be assured that the Samoan Cicadellid fauna has its affinities with other islands of the South Pacific, but we have a number of forms not known from other regions and for them we may postulate an endemic evolution.

The literature for Cicadellidae of Samoa is very meagre and it would seem that little attention to this group has been given in the past. Only scattered records for individual species have come to my notice and, while I have not

had opportunity to consult all possible sources, I have carefully searched through all the publications that would be expected to include such records. The works of Walker, Stål, Signoret, Melichar, Distant, and Kirkaldy have been the main sources for descriptions of species from the broader Oriental faunal region, including India, Ceylon, Malaya, East Indies, and Philippine Islands.

The figures illustrating the paper have been drawn by Mrs. Celeste Taft. Types collected by Buxton and Hopkins are placed in the British Museum (Natural History). Those collected by Bryan, and by Swezey and Wilder, are in the collection of the Bishop Museum, Honolulu. Duplicate or paratype specimens when available are in the author's collection at the Ohio State University.

Agalliopsis Kirkaldy.

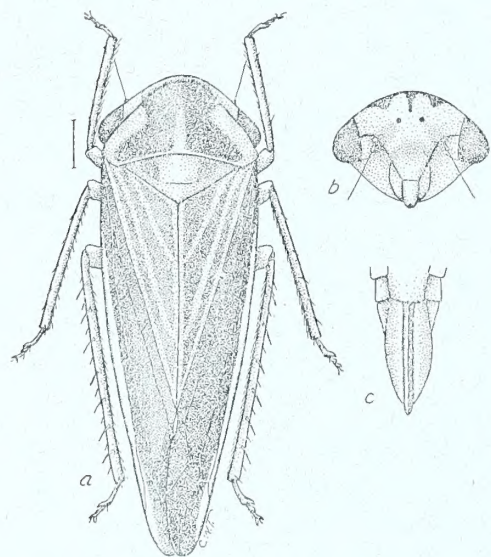
Agalliopsis Kirkaldy, *Bull. No. 3, Div. Ent. Exp. Sta. H.S.P.A.*, p. 31 (1907). (Based on Div. II of Osborn & Ball.)

Agallia (group II) Osborn & Ball, *Proc. Dav. Acad. Sci.*, VII, p. 46 (1897).

1. *Agalliopsis fasciatus*, n. sp. (Text-fig. 1).

Small, head decidedly broader than pronotum, eyes prominent; vertex angulately arched, very short, mid-length less than length at eye; hind border sinuate; ocelli well below border, near together; front narrowing at apex; clypeus longer than broad, sides parallel. Pronotum produced anteriorly much beyond line of eyes, more than half as long as broad, hind border concave. Elytra narrowing apically to rounded tip, venation obscure. Female, last ventral segment truncate, faintly sinuate.

Colour: fuscous above, pale below; vertex basally, except next the eye, ocellar dots, pronotum, except central and lateral fasciae, scutellum in basal angles and elytra, except costa and claval stripes, dark fuscous; face, except



TEXT-FIG. 1.—*Agalliopsis fasciatus*, n. sp.:
a, dorsal view; b, face; c, female genitalia.

angular projection from vertex and the ocellar dots, a median narrow and wider lateral stripes on pronotum, disc of scutellum, broad costal border and two

stripes on clavus and the claval suture, light yellowish brown. Beneath pale, disc of venter infusate.

Length, female, 5.5 mm.

Described from one female (holotype) Malololelei, Upolu, 2,000 ft., 14–30.vii.1924, Buxton and Hopkins.

This species has the pronotum more decidedly produced than in any species known to me and in this respect resembles *Tartessus*, but the ocelli are distinctly below the margin of vertex and in size and general facies the species falls in the *Agallia* group and may be placed in *Agalliopsis* as now constituted. The pronotum is even more produced anteriorly than in the genotype species *novella*, which is a common North American species. In general facies the species resembles *Agallia atrovirens* Melichar, from Ceylon, but in details of picture, as well as the pronounced difference in form of head and pronotum, it is quite distinct.

Genus *Bythoscopus* Germar.

Bythoscopus Germar in Silberman, *Rev. Ent.*, I, p. 180 (1833).

Batracomorphus Lewis, *Trans. Ent. Soc. London*, I, p. 51 (1834).

Macropsis Amyot & Serville, (*nec* Lewis), *Hist. Nat. Ins. Hémipt.*, p. 585 (1843).

Strangalia Stål, *Rio Jan. Hem.*, II, p. 49 (1858).

Pachyopsis Uhler, *Bull. U.S. Geol. & Geog. Survey*, III, p. 466 (1877).

Gargaropsis Fowler, *Biol. Cent. Am. Rhynchota Homop.*, II, p. 167 (1896). Genotype *B. lanio* (L.)

Body depressed, face retracted, vertex short, ocelli on face below margin. This genus is world-wide in distribution, and many of the species in widely scattered localities have many features in common so that separation of species is difficult. The species of the Pacific island groups are no exception, and it is quite possible that some of those given names here may be considered identical with species already described from other regions. However, if we bear in mind the isolation they must represent it is less likely to result in confusion to give them distinctive names than to refer them to species known in other regions.

2. *Bythoscopus chlorophana* (Melichar).

Pachyopsis chlorophana Melichar, *Hom. Faun. Ceylon*, p. 153 (1903).

Bythoscopus chlorophana Distant, *Faun. Brit. Ind. Rhynchota*, IV, Pt. 1, p. 191 (1907).

This is a pale green species sometimes faintly suffused with reddish on the head and pronotum but without markings, except a small blackish spot at tip of clavus.

Length: female, 5 mm.; male, 4.5 mm.

Five specimens: one female, Upolu, 2,000 ft., vii.1924; one male, Upolu Island, Vailima, 12.xii.1925, Buxton and Hopkins; one male, Upolu, Tuaeufu, 9-16-1925, Swezey and Wilder; one male, Malololelei, 2,000 ft., 1.i.1925; and one female, Upolu, Apia, 2.iii.1924, Buxton and Hopkins.

3. *Bythoscopus angustatus*, n. sp. (Text-fig. 2).

Small, narrow; head scarcely as wide as pronotum; vertex short, evenly rounded; front tapering rapidly to a narrow clypeus; clypeus somewhat inflated on basal one-half, sides parallel; lorae distant from margin of cheek; cheek margin evenly rounded; pronotum three times as long as vertex, minutely striate; elytra hyaline, veins margined with minute punctures and hairs very minute or wanting.

Male, last ventral segment elongate, somewhat produced at the middle, pygofers short, plates hidden.

Length: 4 mm.

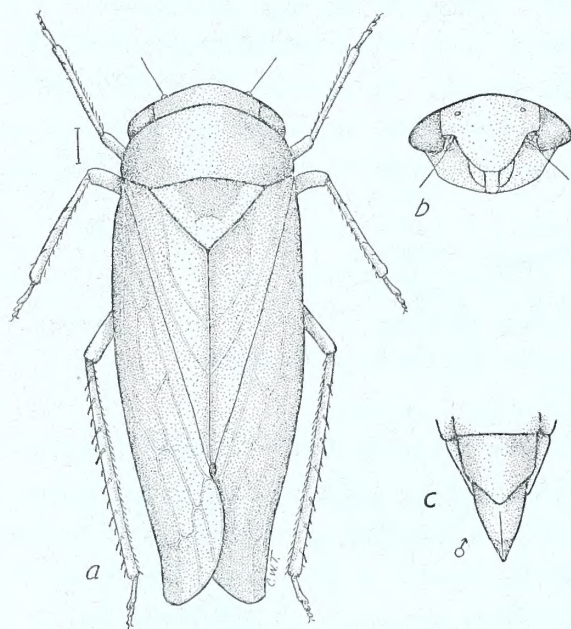
Described from two males: one (holotype) Neiafu, Vavau, Tonga, 1.iii.1925, Hopkins; and one (paratype) Tutuila, Pago Pago, 9-24-1923, Swezey and Wilder.

This species is smaller, the colour paler, and the elytra more hyaline than in *chlorophana*.

4. *Bythoscopus tutuilanus*, n. sp. (Text-fig. 3).

Broad, robust, head scarcely as wide as pronotum, very short; vertex with parallel borders, rounded to the front; front narrowed abruptly to short clypeus; lorae small; cheek margins sinuate; pronotum about five times as long as vertex; elytra opaque, minutely and sparsely hairy.

Female, last ventral segment a little longer than preceding, truncate or slightly concave.



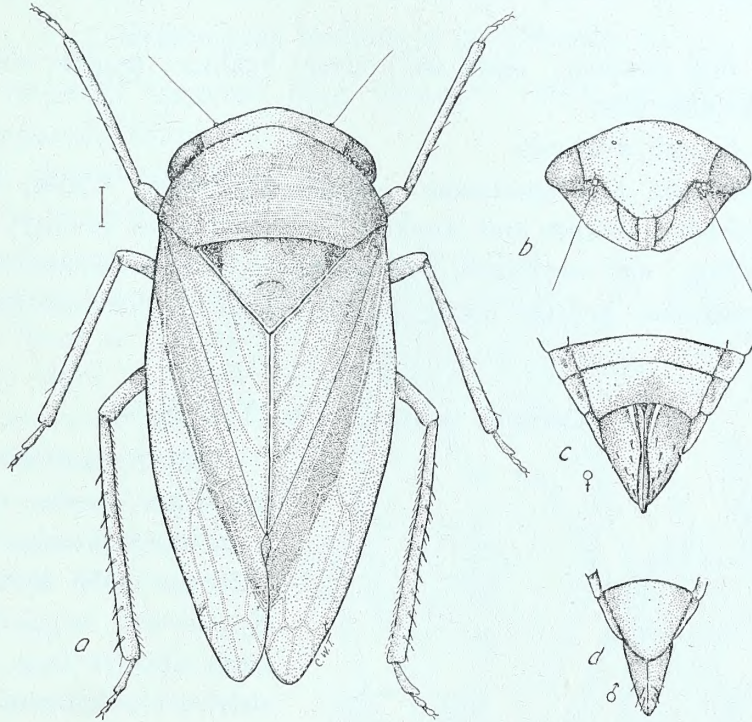
TEXT-FIG. 2.—*Bythoscopus angustatus*, n. sp.:
a, dorsal view; b, face; c, male genitalia.

Male, last ventral segment long, rounded behind, as long as pygofer; pygofer short, ventral margins closely appressed.

Colour dull stramineous, probably green in life, without markings except minute blackish point at tip of clavus.

Length: female, 5 mm.; male, 4.25 mm.

Described from four adults: one female (holotype) Tutuila, 1,070 ft., eastern end of island, Kellers, 6-21-1918; and two males (allotype and paratype)



TEXT-FIG. 3.—*Bythoscopus tutuilanus*, n. sp.: *a*, dorsal view; *b*, face; *c*, female, and *d*, male genitalia.

Tutuila, 760–900 ft., Kellers, iv.1918; one male (paratype) Tutuila, Samoa, 1,200 ft., Kellers, xii.1918. Three nymphs referred to this species with the same data as the last specimen, have the vertex slightly produced, about one-third as long as pronotum, the wing pads extending to first abdominal segment; the body with short appressed hairs, probably about the third instar.

This species is more robust than *chlorophana*, with the head decidedly shorter, and the stramineous colour more intense.

5. *Bythoscopus buxtoni*, n. sp.

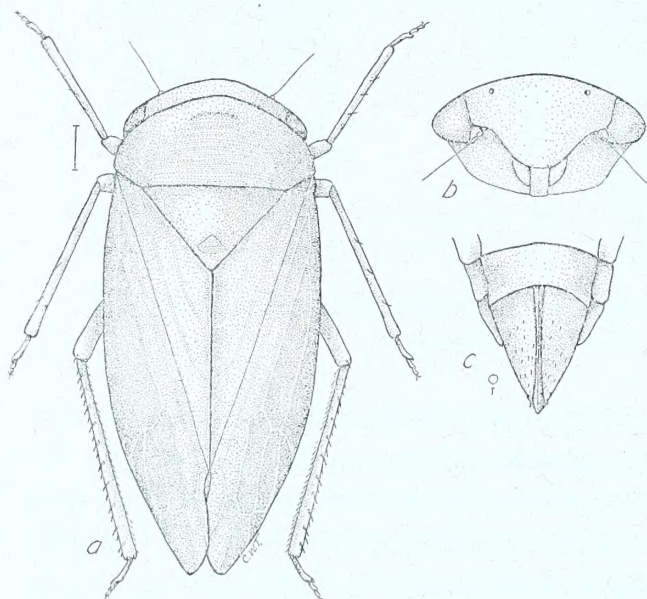
Body elongate; head as wide as pronotum; vertex considerably arched, borders parallel; front flattened, abruptly narrowed from the antennae; clypeus narrowed toward the apex with polished elevation basally; lorae small; margin of cheek sinuate below the eye, subangular at the sides; pronotum three times as long as vertex; elytra shiny, sparsely hairy and punctate.

Female, last ventral segment fully twice as long as preceding, slightly emarginate and very broadly notched at the middle. Pygofers broad, sparsely ciliate.

Colour: dull greenish; ocelli red; elytra hyaline; pygofer with a broad fulvous patch either side.

Female: length, 6.25 mm.

Described from two specimens: female (holotype) Upolu, Malololelei, 2,000 ft., 25.xi.1924, Buxton and Hopkins; one with same locality, 23.xi.1924, abdomen wanting; and one female Tutuila, Afono Trail, 9-25-1923, Swezey and Wilder, referred here, but the female pygofer lacks the coloured patch at the side.

6. *Bythoscopus laticeps*, n. sp. (Text-fig. 4).

Broad; head narrower than pronotum; vertex very short; front much broader than long; antennae under distinct ledges; clypeus half longer than wide; lorae distinct from margin of cheek; cheek broad, the margin scarcely sinuate below eye; pronotum more than twice as wide as length at centre, hind margin truncate; elytra slightly longer than abdomen, smooth, minutely punctate. Female, last ventral segment at apex concave; pygofer short, scarcely exceeded by the ovipositor.

TEXT-FIG. 4.—*Bythoscopus laticeps*, n. sp.: a, dorsal view; b, face; c, female genitalia.

Pale green, stramineous, unmarked. Length, 5 mm.; width of pronotum at base, 1.75 mm.

One specimen: female (holotype) from Tutuila, 900–1,200 ft., centre of island, 6-30-1918, Kellers.

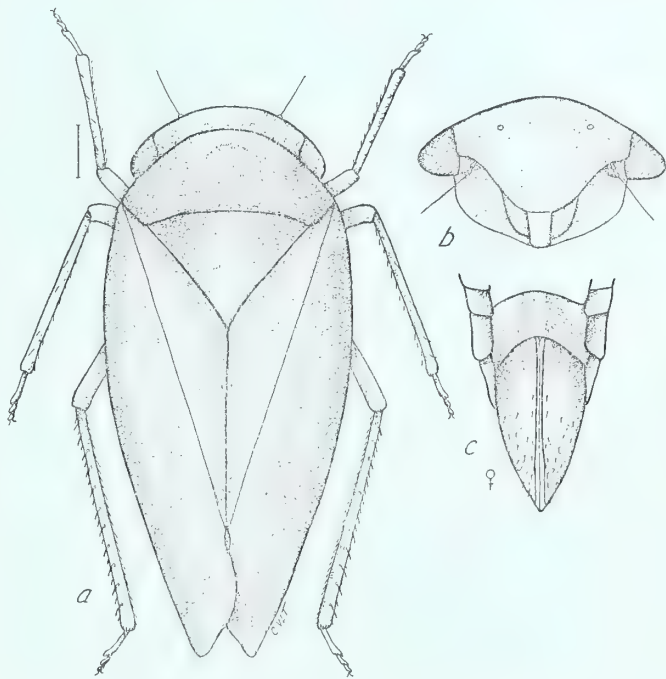
This species is proportionately broader than related forms and the broad face and comparatively short elytra and lack of colour markings serve as differential characters.

7. *Bythoscopus hyalinus*, n. sp. (Text-fig. 5).

Head distinctly narrower than pronotum, rather prominently rounded, vertex with parallel borders; face broad; clypeus slightly narrowing to rounded tip; lorae broad, approaching border of cheek; pronotum nearly four times as long as vertex, over twice as broad as long, concave behind; elytra but little longer than abdomen, costa strongly curved. Female, last ventral segment quite deeply concave, as long as preceding segment; pygofer long, scarcely extending to tip of ovipositor.

Pale green without marking. Length, 6.5 mm.

One specimen, female (holotype) from Tutuila, 1,200 ft., 7-21-1918, Kellers.



TEXT-FIG. 5.—*Bythoscopus hyalinus*, n. sp.: a, dorsal view; b, face; c, female genitalia.

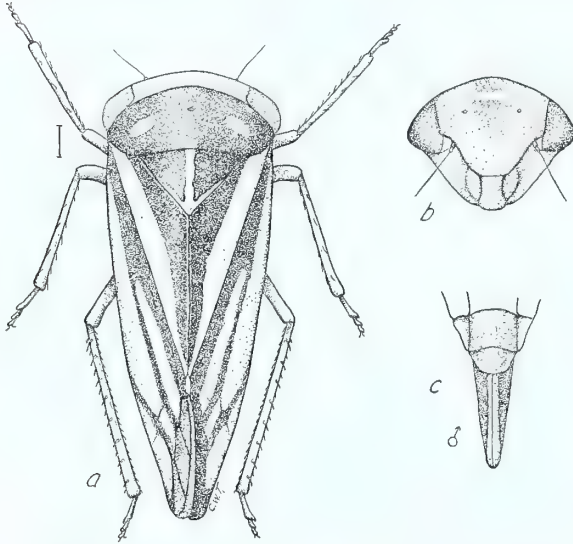
The larger size, pale translucent colour and the strongly curved elytra appear sufficient to separate this from *chlorophana*, to which it seems related.

Genus *Idiocerus* Lewis.

Idiocerus Lewis, *Trans. Ent. Soc. Lond.*, I, p. 47, 1834. Genotype *I. adustus* H.S.

8. *Idiocerus tutuilanus*, n. sp. (Text-fig. 6).

Head distinctly wider than pronotum; eyes large; vertex short, scarcely as long as width between eyes, sinuately narrowing from antennae to clypeus; clypeus half longer than width at base, expanded apically; apex broadly rounded; lorae fusiform; margin of cheek nearly straight; pronotum nearly three times as wide as length at middle; hind border slightly concave; elytra with obscure venation; four apical cells and broad appendix. Male valve rounded behind, plates elongate.



TEXT-FIG. 6.—*Idiocerus tutuilanus*, n. sp.: a, dorsal view; b, face; c, male genitalia.

Length, 4 mm.

Three specimens: one male (holotype) Upolu, Vailima, i.1925, 1,200 ft.; one male (paratype) Malololelei, iv.1925, Buxton and Hopkins; and one male (paratype) Tutuila, xii.1918, Kellers.

This species will fall into a subgenus in which the male antennae do not have the flat discs of typical *Idiocerus*.

Xestocephalus Van Duzee.

Xestocephalus Van Duzee, *Trans. Am. Ent. Soc.*, XIX, p. 298, 1892; *Bull. Buffalo Soc. Nat. Sci.*, V, pp. 197, 214 (1894). Genotype *pulicarius* Van. D.

“Head tumid and rounded before; ocelli placed on the rounded anterior edge superiorly, distant from the eyes; vertex convex, closely evenly punctured, without longitudinal rugae.” (Van Duzee.)

Species included in the genus have now been recognised from Eastern Palaearctic, Ethiopian and Oriental Regions, as well as the Nearctic and Neotropic.

9. *Xestocephalus pardalinus* Distant.

Xestocephalus pardalinus Distant, *Fauna Brit. Ind. Rhynchota*, IV, Pt. 2, p. 348, 1908.

In this species, as defined by Distant, there is a distinct colour pattern and a well-marked dark line above and below the ocelli, including a pale area within which the ocelli are located. Except for the more distinct colour marking and a slight difference indicated in size (which may be a variable character) there is little to separate the species from *apicalis* of Melichar. However, specimens agreeing very perfectly with Distant's description (and type in British Museum) of specimens from Ceylon, Maskeliya, and bearing labels "Upolu Is., Malololelei, 2,000 ft., xii.1925, and vi.1924, P. A. Buxton and G. H. Hopkins," and one "Savaii, Saitalus, v-17-24, Rain Forest, 2,000-4,000 ft., E. H. Bryan collector," are among the specimens referred to me and I am therefore including the record under this name. If future studies prove the species to be identical Melichar's name has priority.

10. *Xestocephalus apicalis* Melichar.

Xestocephalus apicalis Melichar, *Hom. Fauna, Ceylon*, p. 207 (1903).

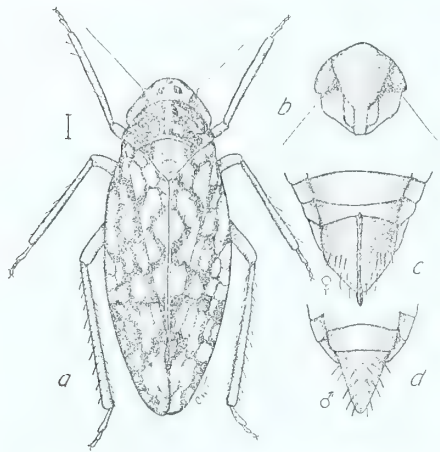
Xestocephalus apicalis Distant, *Fauna Brit. Ind. Rhynchota*, IV, Pt. 2, p. 349 (1908).

The Samoan specimens agree well with Melichar's description with only slight variations in extent or intensity of colour pattern. Four from Malololelei, Upolu, 2,000 ft., vi.1924, Buxton and Hopkins; one Malololelei, Upolu, 2,000 ft., vi.1924; one Tutuila, 760-900 ft., Kellers, iv.1918; one Tutuila, Afona Trail 9-25-1923, Swezey; one Savaii, Salailua, v-17-1924, Rain Forest, 2,000-4,000 ft., Bryan.

Considering the apparent wide distribution now accorded the species and the habitat indicated, the variation noted does not seem unusual. The specimens listed above merge almost into the paler form of what I have taken to be the *pardalinus* of Distant. See *ante*.

11. *Xestocephalus tutuilanus*, n. sp. (Text-fig. 7).

Head narrow, scarcely as wide as pronotum. Vertex as long at middle as at eye, subangulate, rounded to front; front broad, narrowed abruptly to base of short clypeus. Clypeus about as broad as long, sides parallel, apex truncate. Pronotum a little longer than vertex, truncate behind; elytra with distinct veins. Female last ventral segment long, twice as long as penultimate, faintly sinuate and with shallow notch at middle of hind border. Male valve hidden, plates elongate triangular, tips acute.



TEXT-FIG. 7.—*Xestocephalus tutuilanus*, n. sp.: *a*, dorsal view; *b* face; *c*, female, and *d*, male genitalia.

Colour pattern similar to *pulicarius* and *pardalinus*. Vertex pale with two dark spots on disc and dark borders to lighter spot enclosing ocelli. Pronotum brown with rounded spots anteriorly and two larger ones on the disc near the hind margin and a

broken median line, yellowish. Scutellum yellow with darker areas in basal angles. Elytra yellowish subhyaline with distinct brown or fuscous spots as shown in the figure. Beneath light brown.

Length: female, 2.5 mm.; male, 2.25 mm.

Two specimens: female (holotype and paratype) Tutuila, Pago Pago, one 9-9-1923 and one 9-24-1923, Swezey and Wilder; one male (allotype) Lau, Fiji, Namuka, 8-13-1924, Bryan; one male (paratype) Tutuila, 760-900 ft., Kellers, iv.1918; one female (paratype) Pago Pago, Tutuila, 0-300 ft., Kellers, iv.1918.

12. *Xestocephalus piceatus*, n. sp.

Head slightly narrower than pronotum, rounded before, vertex broader than long, scarcely longer at middle than at eye. Pronotum twice as wide as long, hind margin slightly convex; elytral veins obscure. Male valve very short, almost hidden under preceding segment. Plates long, tapering to blunt upturned apices, clothed with long cilia.

Dark piceous above except two whitish subhyaline spots on costa near

apex and two faint whitish areas on inner margin, one at tip of clavus and the other half-way on appendix and invading inner apical cell. Wing veins dusky, beneath piceous; margins of ventral segment, basal half of plates and the legs pale.

Length: male, 3 mm.

One male (holotype) Apia, Upolu, 1.x.1925, Buxton and Hopkins.

This species seems well marked by the rounded border of vertex and the dense piceous colour.

13. *Xestocephalus reflexus*, n. sp.

Head narrower than pronotum, broadly subangulate. Vertex half longer at middle than at eye, ocelli close to anterior margin; front broad, narrowed rather abruptly to clypeus; cheek convex; pronotum half longer than vertex; elytral veins mostly obscure. Female, last ventral segment long, twice as long as preceding, truncate behind, faintly notched at middle, pygofer nearly as long as ovipositor, ciliate on apical half.

Pale brown; the scutellum and elytra infusate or piceous; two strongly reflexed pale spots on costa. Beneath pale testaceous with some piceous suffusion.

Length, 3.5 mm.

One specimen, female (holotype), Upolu, Malololelei, 24.ii.1924, Buxton and Hopkins.

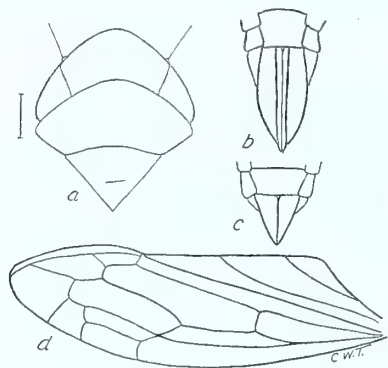
This might seem possibly to be the female of *piceatus*, but aside from the difference in locality there is a distinct difference in the colour pattern and it seems wiser to consider them distinct. If additional material or the finding of the sexes together proves an identity one may be placed in synonymy without serious consequences, a result that would seem preferable to confusing two species under one name.

Genus *Hecaloidella*, new genus.

Allied to *Hecalus* and *Parabolocratus* but with different venation. Body depressed, head thin, margin of vertex acutely angular, almost foliaceous, rounded in front. Elytral venation distinct, two claval veins and a cross-vein from outer claval to suture. Three anteapical, four apical cells, the outer one very broad and its base resting on the nodal outer anteapical. Genotype *H. nitida*, n. sp.

14. *Hecaloidella nitida*, n. sp. (Text-fig. 8).

Female: head slightly wider than pronotum; vertex large, scarcely as long as wide at base, rounded, in female faintly subangulate, margin thin; ocelli close to eyes; front broad, sinuate next antennae, tapering sharply to clypeus; clypeus longer than broad, widening apically; lorae broad, almost



TEXT-FIG. 8.—*Hecaloidella nitida*, n. sp.: *a*, dorsal view, head, pronotum and scutellum; *b*, female, and *c*, male genitalia; *d*, elytron.

touching margin of cheek; cheek broad, margin faintly sinuate. Pronotum scarcely longer than vertex, strongly arched before, lateral margin very short, hind border slightly emarginate; scutellum wider than long, with a curved indented line behind the half-way point. Elytra polished, veins distinct, nodal areole shorter than outer anteapical, outer apical broad, resting on nodal, outer anteapical and part of middle anteapical. Second apical narrow at base, much wider at apex. Female, last ventral segment about twice longer than preceding, truncate; pygofer scarcely exceeded by ovipositor and not reaching tip of elytra.

Colour: vertex, pronotum and face pale yellowish, translucent. Margin of vertex, scutellum, elytral veins tinged with fuscous or pale brown. Elytra hyaline with fuscous patches on tips of claval veins, the discal cross-veins and the veins at base of outer apical areole and margin of apical cells.

Length, 5 mm.

Male. What I am confident is the male of this species, having same locality of capture, has the vertex rounded and not at all subangulate and the most of the pronotum and all of scutellum, elytra, and all beneath except the face are deeply suffused with piceous. The male valve is very small, the hind border rounded, the plates broad at base, narrowed and acutely pointed at apex.

Length, 4.5 mm.

The female (holotype) and male (allotype) are both from Malololelei, Upolu, 2,000 ft., vii.1924, Buxton and Hopkins.

This species seems to bear some resemblance to *Parabolocratus wallengreni* Stål, but must, I believe, have different generic position.

Genus *Nephotettix* Matsumuri.

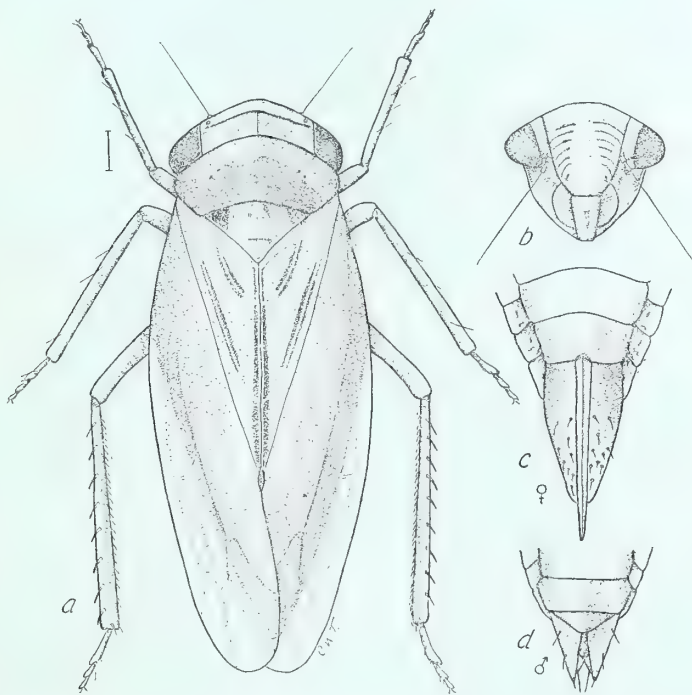
Nephotettix Matsumuri, *Termés füzetek*, XXV, pp. 356 and 378 (1902). Genotype *N. apicalis* Motsch.

Related to *Thamnotettix*.

15. *Nephotettix plebeius* Kirkaldy (Text-fig. 9).

Nephotettix plebeius Kirkaldy, *Bul. No. 1*, pt. 9, *Div. Ent. Exp. Sta. H.S.P.A.*, p. 331 (1906).

This species was described by Kirkaldy from specimens taken in Australia at various localities and is recognised by the grey colour, dark transverse bar



TEXT-FIG. 9.—*Nephotettix plebeius* Kirkaldy : *a*, dorsal view ; *b*, face ; *c*, female, and *d*, male genitalia.

on vertex just behind ocelli and extending the distance between them with a trace of angular projection at centre. Length : female, 5.5–5.75 mm. ; male, 4.75–5.25 mm.

The collection from Samoa includes a large number of specimens from different localities and indicates a quite general distribution on different islands

of the group. It is probably a grass feeder, as records include *Sporobolus* as a host plant. The locality records are as follows :—

A large series of specimens of both sexes and many nymphs from Tutuila, collected in March, Sept., Oct., and Dec.

Eleven from Tau, Manua, 17–27.ix.1923 ; three from Savaii, Safune, 11.v.1924, Bryan ; two Upolu, Mulifanua, 16.vii.1925, Wilder ; two Apia, 13.ix.1923, *Sporobolus*, Swezey and Wilder ; four Malololelei, xii and ii.1924 ; four Apia, ii, iv.1924, Buxton and Hopkins.

Also there are two smaller males, otherwise apparently identical, from Neiafu, Vavau, Tonga, 5.iii.1925, Hopkins.

This would seem to be one species that has had favourable opportunities for migration, and it may be that its association with a grass that was scattered by human agencies was a distinct factor in its distribution.

Drabescus Stål.

Drabescus Stål, *Öfv. Vet.-Akad. Förh.*, XXVII, p. 738 (1870). Genotype *D. remotus* Walk.

Distribution apparently limited to Oriental Region, with records from India, Malaya, and the Philippines.

16. *Drabescus samoanus*, n. sp. (Text-fig. 10).

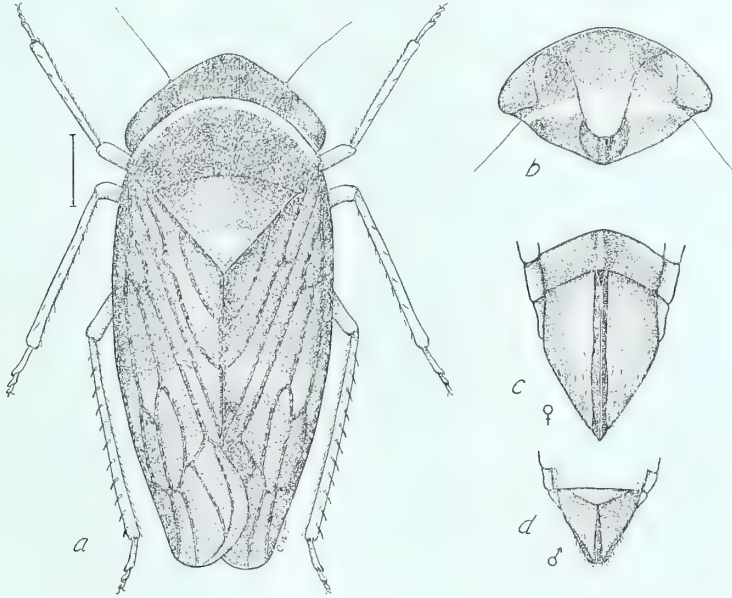
Head distinctly wider than pronotum ; eyes large ; vertex broad, depressed, angulate, one-fourth longer at middle than at eye ; margin elevated, ocelli minute on extreme edge half-way from eye to middle ; front depressed at base, scarcely longer than broad, sides nearly parallel from antennae to abruptly contracted apex ; clypeus long, narrow, widening to apex and with strong median keel ; lorae large, broad, nearly touching border of cheek ; cheek depressed below antennae ; lower part flattened, margin deeply sinuate below the eye ; pronotum twice as long as vertex, hind border concave, disc transversely minutely striate, scutellum minutely granulate, elytral veins punctate except in apical cells ; claval and discal areoles rugose. Female, last ventral segment as long as preceding, slightly sinuate and with a shallow notch at middle of hind border. Male valve small, plates small, triangular, tips acute.

Dark brown, infusate in typical example, vertex fuscous, pronotum yellowish on anterior border ranging in extreme forms of males to entire pronotum and scutellum ; scutellum pale yellowish ; elytra brownish subhyaline, the

veins dotted with yellow and a paler transverse band before apex of clavus. Base of front and eyes fuscous; a yellowish band crossing lower part of front and cheeks below eyes. Clypeus and lorae fuscous. Beneath dark brown, a yellow or whitish spot on propleura.

Length: female, 9 mm.; male, 7 mm.

Nineteen specimens. Four females (holotype and paratypes) and two males (allotype and paratype) Tutuila, centre of island, 900–1,200 ft., Kellers;



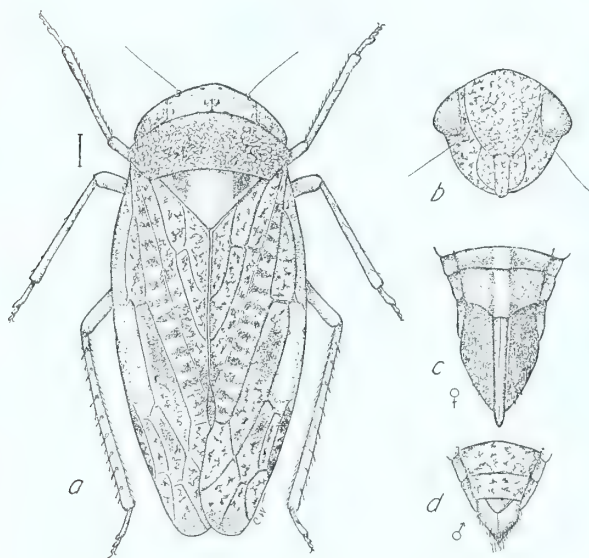
TEXT-FIG. 10.—*Drabescus samoanus*, n. sp.: *a*, dorsal view; *b*, face; *c*, female, and *d*, male genitalia.

one male (paratype) Tutuila, Leone Rd., ix-7-1923, Swezey and Wilder; one female (paratype) Upolu, Tuaefu, ix-16-1923, Swezey and Wilder; one female Savaii, Safune, v-3-1924, Rain Forest, 2,000–4,000 ft., Bryan; four Apia, Upolu; one female (paratype) Pago Pago, 4.xi.1925, Tutuila Island; one female (paratype) Vailima, Upolu; two females, one male (paratypes) Malololelei, Upolu, 2,000 ft., 25.vi.1924, Buxton and Hopkins; two nymphs.

Two nymphs, evidently associated with this species, having date and locality same as holotype, have the head produced into a narrow snout as long as eye. The head broader than the pronotum and the abdomen long and tapering to a very narrow tip.

Eutettix Van Duzee*Eutettix* Van Duzee, *Psyche*, VI, p. 307 (1892). Genotype *E. luridus* Van Duzee.17. *Eutettix ornatella*, n. sp. (Text-fig. 11).

Head as broad as pronotum, short, vertex broadly rounded, slightly longer at middle than at eye. Transverse line scarcely impressed; rounded to front; front broad at base, narrowed from below antennae; clypeus rather long, sides



TEXT-FIG. 11.—*Eutettix ornatella*, n. sp.: a, dorsal view; b, face; c, female, and d, male genitalia.

nearly parallel, narrowing slightly to apex. Lorae broad, approaching margin of cheek; cheek broad, margin slightly sinuate; pronotum twice as long as vertex, lateral margins very short, hind border emarginate; scutellum small, elytra with distinct veins and numerous cross-veinlets. Apical cells four, apex rounded. Female ventral segment elongate, sinuate at side, produced medially, hind border at centre rounded. Male valve small, obtusely angulate behind; plates long, narrowed behind middle to acute tips; densely hairy.

Colour pale grey, vertex anteriorly yellow, base tinged with orange, two dark dots near tip and a series of triangular points along base. Face yellowish-grey mottled with light fuscous, pronotum irrorate with brown or pale fuscous. Elytra grey-white with veins and coarse veinlets mostly brown or fuscous, about four post-nodal oblique fuscous bars. In some specimens a wavy white patch in distal part of costal areole and outer discal areole. This area otherwise paler than discal area. Beneath grey, mottled with fuscous.

Length: female, 4 mm.; male, 3.75 mm.

Sixteen specimens: nine females (holotype and paratypes) and six males (allotype and paratypes), one abdomen missing. Upolu Island, Malololelei, 2,000 ft., xii.1925, Buxton and Hopkins.

This species is distinctly more slender than *discigutta* Walker, with which it has some characters in common.

Stirellus Osborn and Ball.

Stirellus (subgenus) Osborn & Ball, *Ohio Nat.*, II, p. 250 (1902).

Stirellus Sleesman, *Ent. Am.*, X, p. 124 (1930). Genotype *S. bicolor* Van D.

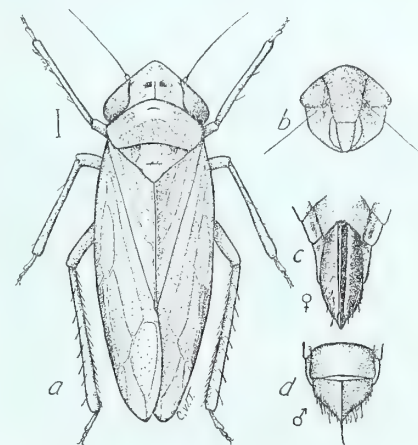
In this genus as here recognised the vertex is long and angular, though not always as long at middle as between the eyes, the elytra with three anteapical cells, one cross-nervure from inner sector to claval. They are insects of small size and similar to *Deltocephalus* in general facies.

18. *Stirellus pacificus*, n. sp. (Text-fig. 12).

Head wider than pronotum, vertex three-fourths as long as width between eyes, obtusely angulate; front long narrowing uniformly to base of clypeus; clypeus about twice as long as width at base and much narrowed at apex; lorae long, rather narrow, nearly reaching margin of cheek; cheek broad, broadly subangulate; pronotum arched before, lateral margins short, hind border concave. Elytra longer than abdomen, outer sector twice forked, inner apical areole large, stylate at tip, appendix narrow, extending to tip. Female last ventral segment long, concave behind; male valve very short, plates broad at base narrowing abruptly from middle to acuminate tips.

Light grey, vertex with two transverse discal spots and faint oblique dots near apex; front with faint lateral arcs. Tergum black margined with yellow, venter black, last ventral segment pale. Pygofer black with whitish setae.

Length: female, 3 mm.; male, 2.75 mm.



TEXT-FIG. 12.—*Stirellus pacificus*, n. sp.: a, dorsal view; b, face; c, female, and d, male genitalia.

Twenty-one specimens: six females (holotype and paratypes), four males (allotype and paratypes) Tutuila, Pago Pago, 9-9-1923, Swezey and Wilder; ten specimens (paratypes), one female and five males, Malololelei, Upolu, 2,000 ft.,

vi.1924, Buxton and Hopkins ; four females and one male (paratypes) Upolu, Mulifanua, 7-16-1923, Wilder.

In general appearance this resembles *Stirellus (Phrynomorphus) hospes* Kirkaldy, but the pattern on the vertex is different.

19. *Stirellus samoanus*, n. sp.

Head slightly wider than pronotum ; vertex about as long at middle as width at base, distinctly angulate, nearly twice as long at middle as next to eye ; ocelli close to the eye ; front slightly convex, sloping evenly to base of clypeus ; clypeus narrowing slightly toward apex, half longer than wide ; lorae large ; margin of cheek sinuate ; pronotum as long as vertex, scarcely concave behind ; elytral veins distinct, claval veins united by a single cross-vein, one cross-vein in disc, central anteapical cell narrowed at the middle, four apical cells.

Male, last ventral segment short, valves small, plates short (apparently with broken tips) not reaching tip of pygofer. Tip of pygofer with stiff bristles darkened at the tip.

Pale straw-coloured, the apex of vertex and a line each side of the central impressed line and margin at eye, figure on anterior part of pronotum and elytral veins pale yellow, front pale brownish with faint yellowish-white arcs. Abdomen beneath black, with lateral margins of plates and pygofer pale yellow.

Length, 2.6 mm.

Described from one specimen, male (holotype) Savaii, Safune, 4-v-1924, Bryan.

This species approaches in size *Stirellus (Phrynomorphus) hospes* Kirk., but is slightly larger, and the picture on the vertex is distinctly different.

20. *Stirellus affinis*, n. sp.

Head wider than pronotum ; vertex sharply angulate, length at middle equal to width between the eyes ; ocelli close to the eyes ; front narrowed slightly, curved from antennae to the clypeus ; clypeus broad, narrowed slightly toward the apex, half longer than width at base ; lorae narrowed below ; cheek margin distinctly sinuate ; pronotum scarcely as long as vertex, slightly concave behind ; claval veins without cross-vein, one cross-vein on the disc.

Male, last ventral segment scarcely as long as preceding ; valves small,

rounded behind ; plates broad at base, constricted to acute tips, margins ciliate, slightly exceeded by the pygofer which is quite distinctly ciliate. Pale straw colour, markings of vertex and pronotum obscure ; elytra hyaline with traces of fuscous margins in the cells and a distinct fuscous spot at base of middle anteapical cell. Beneath pale, abdominal segments somewhat suffused, especially at the sides, with fuscous.

Length, 2.5 mm.

Described from one male (holotype) Tau, Manua, 9-27-1923, Swezey. Collected from grass.

This species comes very close to *Stirellus* (*Phrynomorphus*) *hospes* Kirk., but differs distinctly in the picture of the vertex and the distinct frontal arcs : it agrees with it in the fuscous spot at base of middle anteapical cell and differs but slightly in the male genitalia.

I have compared it with one of Kirkaldy's specimens, probably a co-type, and I am satisfied that it cannot be considered identical with that species.

21. *Stirellus tauensis*, n. sp.

Head wider than pronotum ; vertex subangulate, wider at base than length at middle ; length at middle one-third longer than at eye, rather distinctly rounded to front ; front distinctly convex, narrowing rather sharply to the base of clypeus ; clypeus broad, narrowing slightly toward the apex ; cheek margin sinuate ; pronotum as long as vertex, slightly concave behind ; elytral veins rather weak with one cross-vein on disc.

Female, last ventral segment longer than preceding ; hind border truncate, the lateral angles slightly produced ; pygofer broad, scarcely exceeded by the ovipositor.

Straw-coloured ; vertex with a pair of oblique dashes at the apex, a faint dot near the base ; pronotum with impressed fuscous markings anteriorly ; elytra with whitish veins, the areoles in part faintly margined with fuscous ; front with faint lateral arcs ; pygofer at base somewhat suffused with fuscous.

Length, 3 mm.

Described from one female (holotype) "Tau, Manua, 9-27-1923, O. H. Swezey collector, grass."

This specimen was mounted with the one described as *affinis*, evidently collected at the same time but certainly a different species. It has the vertex

shorter, much less angulate, and the picture would, I think, preclude its being considered the female of any other species referred to this genus.

22. *Jassus fijianus*, n. sp.

Head narrower than pronotum ; eyes large ; vertex narrow, widening from base to front, scarcely longer than width of the eyes and but little longer than at base ; front narrow, contracted at clypeus ; clypeus broadly carinate, long, twice as long as width, broadening toward the apex ; pronotum short, scarcely longer than vertex, distinctly granulate, hind border concave ; scutellum sparsely granulate on the basal part, apical part elevated ; elytra with the veins not granulate, and faintly marginate with punctures.

Female, last ventral segment elongate, slightly produced and rounded on the hind border. Colour dark brown ; front border of vertex, ocelli, basal part of frons, a few transverse arcs and some other indistinct maculae on the elytra, fuscous ; disc of vertex, pronotal and scutellar granules and marginal dots and dashes on elytral veins, yellowish. Beneath yellowish, legs tinged with brown.

Length, 7 mm.

One specimen (holotype) Fiji, Lau, Kambara, 23.viii.1924, Bryan.

This species can hardly be considered a member of the Samoan fauna and there does not appear to have been any member of this genus recorded from Samoa.

Genus *Jassoidula*, new genus.

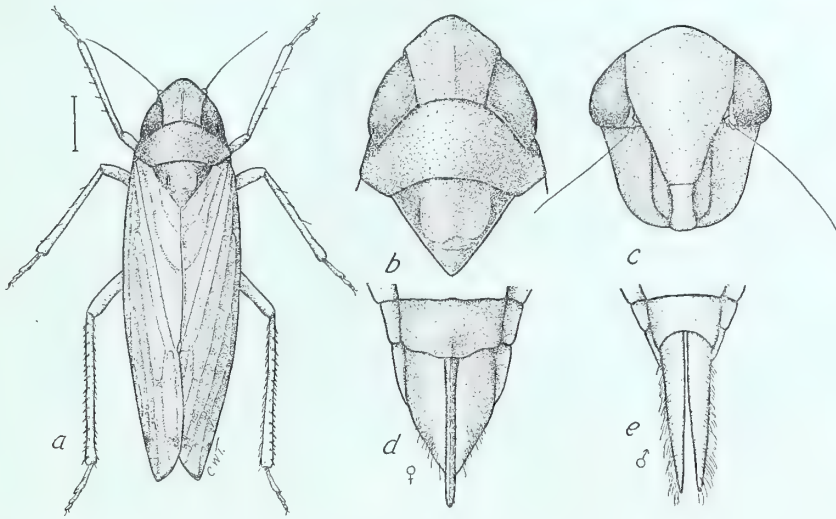
Nearly related to *Jassus* and having considerable resemblance to *Neocoelidia* but with produced head, which is extended distinctly beyond the margin of the eyes, large eyes and very large, conspicuous ocelli located half-way between eyes and tip of vertex. These are fairly distinct differences from either *Jassus* or *Neocoelidia*.

The male plates seem to offer a distinctive character as they are very much expanded posteriorly and appear in position very much like the expanded pygofer, but close examination indicates that the oedeagus is a slender structure within these plates or outer claspers and the pygofer is a much reduced structure hidden from below by the expanded plates. Valve apparently wanting or covered. Elytra with five apical cells. Antennae quite long. Genotype : *Jassoidula straminea*.

23. *Jassoidula straminea*, n. sp. (Text-fig. 13).

Head narrow ; vertex produced, subangulate, widening before eyes ; front long, narrow, tapering to base of clypeus ; clypeus elongate, carinate ; pronotum short, arched before, concave behind ; elytra with Jassine venation, veins distinct, apical cells four.

Female, last ventral segment long, hind border sinuate, produced medially ; ovipositor extending one-fourth its length beyond tip of pygofer. Male valve hidden. Plates narrow, elongate, tapering to acute tips.



TEXT-FIG. 13.—*Jassoidula straminea*, n. sp. : *a*, dorsal view ; *b*, vertex, pronotum and scutellum ; *c*, face ; *d*, female, and *e*, male genitalia.

Colour, dull stramineous to ochreous, without evident markings except a smoky band and spot on elytra beyond tip of clavus.

Length : female, 6 mm. ; male, 5.25 mm.

From Tutuila : seven female specimens (holotype and paratypes), 760–900 ft. ; five females, 900–1,200 ft. ; one male, 1,070 ft. ; two males (allotype and paratypes) Tutuila, Pago Pago, 30.ix.1923, Swezey and Wilder.

24. *Jassoidula niuensis*, n. sp.

Similar to *straminea* but with more distinct fuscous markings on the elytra and two distinct fuscous points on the scutellum. Vertex with sides nearly parallel, widened slightly in front of eyes, subangulate ; ocelli large, con-

colourous with front ; front narrow, tapering moderately to clypeus, broadly carinate, widening distinctly toward the tip ; lorae narrow ; cheeks narrow ; pronotum scarcely as long as vertex, minutely rugose ; scutellum smooth, deeply indented behind the middle ; elytral veins distinct.

Female, last ventral segment elongate, more or less compressed and carinate, hind border produced, rounded. Male, plates long, very narrow at the base, broadly expanded, foliaceous, apex subangulate, with an apical seta ; with the plates, outer surface densely minutely hairy ; pygofer short and hind margin ciliate.

Colour, dark stramineous. Vertex with a more or less obsolete reddish stripe on either side ; the pronotum slightly infuscate on the disc ; scutellum with two distinct fuscous dots ; elytra with the apical part of clavus and two bands across the apex fuscous, veins partly infuscate, the central part of the clavus and a broad costal area subhyaline. Beneath paler.

Length : female, 5.5 mm. ; male, 5 mm.

Eight females (holotype and paratypes), twelve males (allotype and paratypes), from Savage Island, Niue, 6.viii.1918, Kellers.

This species is evidently very close to *straminea*, but it is uniformly smaller and the females are distinctly marked with a fuscous pattern that is different from that of *straminea*, which, with the difference in location, seems to justify a separate description.

25. *Jassoidula ochracea*, n. sp.

Vertex a little longer than width at base, rounded, scarcely subangulate in front ; ocelli very large, filling a large part of the space between eyes and tip of vertex ; front slightly elevated above antennae, narrowing gradually to base of clypeus ; clypeus narrowed at base, expanded to tip ; lorae rather broad, distant from margin of cheeks ; margin of cheeks scarcely sinuate ; pronotum short, scarcely as long as vertex, hind border slightly concave ; scutellum rather small.

Male, valve wanting ; genital plates long, much expanded apically, densely hairy, the margins, especially on the outer part, deeply fuscous.

Colour : vertex black marked with yellowish at the base and with two large yellowish spots including the ocelli ; front brown, bordered with fuscous ; clypeus yellowish with a fuscous carina ; pronotum yellow ; elytra ochreous,

apical border somewhat infusate, beneath dull ochreous ; abdominal segments infusate with yellowish margins.

Length, 6 mm.

One specimen (holotype), male, Upolu, Malololelei, 2,000 ft., xii.1925, Buxton and Hopkins.

26. *Jassoidula infusata*, n. sp.

Similar to *straminea* but with a distinct infusate pattern covering most of the pronotum, scutellum and central part of the elytra.

Vertex longer at middle than width at base, distinctly produced in front of eyes ; ocelli very large ; antennae reaching second coxae ; front narrow, sloping to clypeus ; clypeus narrow at base, expanded and emarginate at tip ; vertex minutely granulate, at base finely shagreened, above minutely rugose and carinate ; elytral veins prominent.

Male, plates rather thick at base, extremely flat and expanded apically, with long dense hairs.

Basal part of vertex, pronotum, and base of scutellum and a broad middle irregular stripe on the elytra, infusate ; apex of vertex, tip of scutellum, a ragged inner border and a broad costal margin, whitish or subhyaline ; underneath light brown ; the face somewhat yellowish.

Length, 5.5 mm.

One male (holotype) Tutuila, 900–1,200 ft., centre of island, 30.vi.1918, Kellers.

27. *Jassoidula metallica*, n. sp.

Head slightly narrower than pronotum ; vertex as wide as the eyes, widening slightly toward the apex ; margins elevated, rounded anteriorly ; front narrow, slightly contracted below the eyes ; clypeus half longer than broad, sides nearly parallel, slightly expanded toward apex ; lorae small, distant from cheek margin ; cheek margin scarcely sinuate ; pronotum rather minutely granulate as well as vertex, sinuate behind ; scutellum slightly granulate on the basal part ; elytra with strong veins, five apical cells.

Female, last ventral segment twice as long as preceding, produced and distinctly carinate ; pygofer short, slightly exceeded by the ovipositor, which extends nearly to tip of elytra. Colour dark fuscous, and pale fulvous and

yellow. Vertex yellow with curved fuscous stripes at side; pronotum dark fuscous; lateral portions yellowish; elytra metallic, bronzy, somewhat iridescent, purplish toward the tip; base of clavus and patch on base of corium dark greenish, apical cells smoky, costa with a hyaline patch at centre and in the first apical cell; beneath the front fulvous, cheeks yellowish, legs yellowish becoming fulvous before tips of femora and tibiae, abdomen black above, pale brown below, base of last ventral segment and sides of pygofer fuscous. Length, 5.5 mm.

One specimen: female (holotype) Nukualofa, Tonga, 16.ii.1925, Hopkins.

This interesting little species seems to be somewhat intermediate between *Jassus* and *Jassoidula*, but in most characters it seems to fit in with the latter genus.

28. *Jassoidula limbata*, n. sp.

Head narrower than pronotum; vertex moderately produced before the eyes, widening gradually from the base, a little longer than width at base; antennae long, reaching hind coxae; front narrow, narrowed below the eyes, tapering to clypeus; clypeus long, twice as long as width at base, weakly carinate; lorae narrow; cheeks scarcely sinuate below the eyes; pronotum nearly as long as vertex, beneath carinate, hind border sinuate; elytral margins nearly parallel, apex rounded.

Female, last ventral segment half longer than preceding, distinctly produced, a broad median lobe with a small notch at the tip; ovipositor half longer than pygofer, reaching tip of elytra. Male, plates rather thick at base, much expanded, flat on the apical part and densely covered with long whitish hairs.

Colour, light brown; the eyes, apex of vertex, sides of pronotum, most of the elytra, fuscous; the disc of vertex, pronotum, and scutellum brown; sides of vertex, the inner border of clavus and the costa and an apical margin of elytra, pale brown or yellowish; beneath pale yellowish, the front fuscous at base, lower part and clypeus fulvous; veins and tergum blackish; ovipositor, margin of pygofer black, tip of ovipositor brown. In the male the abdomen is dark beneath as well as above with the margins of the segments pale. Length, 8 mm.

One female specimen (holotype) Malololelei, Upolu, 2,000 ft., vi.1924, Buxton and Hopkins; one male (allotype) Savaii, Salailua, v.1923-1924, Bryan.

The male allotype associated with this species agrees so perfectly in colour pattern that I am confident it should be placed here in spite of the different locality record.

29. *Jassoidula cuprescens*, n. sp.

Head distinctly narrower than pronotum, vertex broadening from the base, elongate, fairly subangulate before; front narrow, somewhat sinuate between antennae, tapering to narrow clypeus; clypeus narrow at base, expanding to truncate tip with a distinct keel on basal half; lorae rather large, with angular projections toward antennae; cheek margins slightly sinuate; pronotum short, two-thirds as long as vertex, distinctly granulate, hind border scarcely sinuate; scutellum minutely granulate or shagreened; elytra with distinct venation.

Male, plates rather thick at base, narrow, broadening to moderately expanded apical portion, with rather short fine hairs.

Colour dark fuscous to blackish, the vertex with a median narrow pale line, margins of eyes pale, hind border of pronotum narrowly brownish; apex of scutellum bordered with light brown; elytra metallic green at base, clavus and most of corium hyaline, the patch on the costa and a round spot in the outer apical cell pale yellowish. Beneath entirely blackish, except the sutures and antennae; beak and legs yellow; abdomen black, the segments with pale narrow margins, base of plates pale. Length, 5 mm.

One specimen, male (holotype), Neiafu, Vavau, Tonga, 5.iii.1925, Hopkins.

This species has the male plates somewhat less expanded than in the typical forms of the genus, but it agrees better here than with *Jassus*. The sinuated frons seems to approach the character given in the genus *Guliga* Dist., but in that genus the sinuation is very pronounced and apparently the frons widens toward the apex, which is not the case in this species.

30. *Jassoidula pallida*, n. sp.

Head narrower than pronotum; vertex longer at middle than at base and base concave, apex rounded; ocelli conspicuous, half-way between eyes and tip; antennae long, reaching hind coxae, front with sides nearly parallel to below the middle, narrowing sharply to clypeus; clypeus one-half longer than broad,

widening a little to the tip; lorae rather small, distant from cheek margin, margin of cheek sinuate below the eye; pronotum about two-thirds as long as vertex, weakly granulate; hind border sinuate; scutellum with a deep impression at the middle, smooth; elytra with five apical cells, veins distinct.

Female, last ventral segment one-half longer than the preceding, hind border sinuate, median portion slightly produced, a very shallow notch at middle, ovipositor exceeding tip of pygofer, reaching nearly to tip of elytra.

Colour pale stramineous without markings, except a fulvous stripe at the sides of the vertex. Elytra hyaline. Length, 6 mm.

One specimen, female (holotype), Haapai, Tonga, ii-26-1925, Hopkins.

This species appears to fit into the genus although there is no male for comparison with other species of the genus.

Genus *Nesosteles* Kirkaldy.

Nesosteles Kirkaldy, *Bul. No. 1, Div. Ent. Exp. Sta. H.S.P.A.*, p. 343 (1906).

Very similar to *Eugnathodus* Baker, possessing a vestige of nervure forming an areolet in basal part of costal areole, scarcely evident in the Nearctic forms. Genotype: *Nesosteles hebe* Kirkaldy.

31. *Nesosteles hebe* Kirkaldy.

Nesosteles hebe Kirkaldy, *Bul. No. 1, Pt. 9, Div. Ent. Exp. Sta. H.S.P.A.*, p. 343 (1906).

Head as wide as pronotum; vertex short, as long at middle as at eye. Body slender, sides subparallel, abdomen black above.

Length: female, 4 mm.; male, 3 mm.

Specimens from Savaii, Safune, v-4-1924, Lower Forest, Bryan, and Savaii, Sailailua, v-16-1924, lowland to 1,000 ft., Bryan.

Originally described from Fiji. This species seems to be a common, often very abundant, insect in many of the Polynesian islands.

32. *Nesosteles tutuilana*, n. sp. (Text-fig. 14).

Head wider than pronotum, distinctly arched or curved. Vertex short, as long at middle as at eye. Front a little longer than broad, sides curving to narrow apex; clypeus rather long, narrowing slightly to apex; lorae close to

margin of cheek; cheek margin faintly sinuate; pronotum nearly four times as long as vertex, lateral margins short, hind border truncate; elytra with costa convex. Female, last ventral segment as long as preceding, slightly indented to form broad median lobe, the indentations accentuated by black projection. Male valve large, triangular; plates short, narrowed to broadly rounded tips, scantily setose.

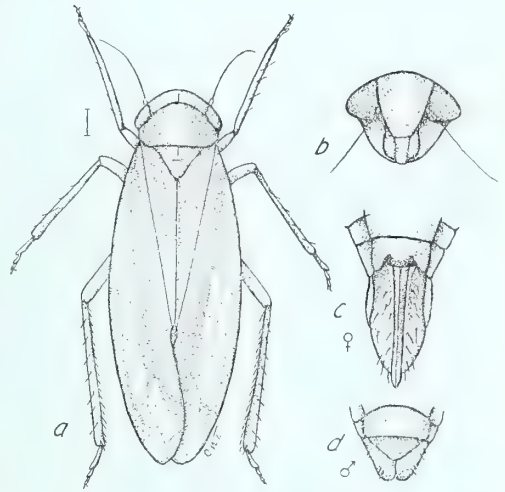
Pale gray marking. Elytra subhyaline; veins concolorous. Beneath pale except the black marking on hind border of female last ventral segment.

Length: female, 3 mm.; male, 3 mm.

Tutuila, Leone Rd., 2-19-1924,

Bryan; Pago Pago, 9-4-1923, Swezey and Wilder; and Savaii, Safune, v-11-1924, Lower forest, 1,000–2,000 ft., Bryan.

This species is smaller than *hebe*, more yellowish in tint, and lacks the longitudinal stripes usually evident in that species, and the genitalia are distinct.



TEXT-FIG. 14.—*Nesosteles tutuilana*, n. sp.:
a, dorsal view; b, face; c, female, and
d, male genitalia.

Genus *Homa* Distant.

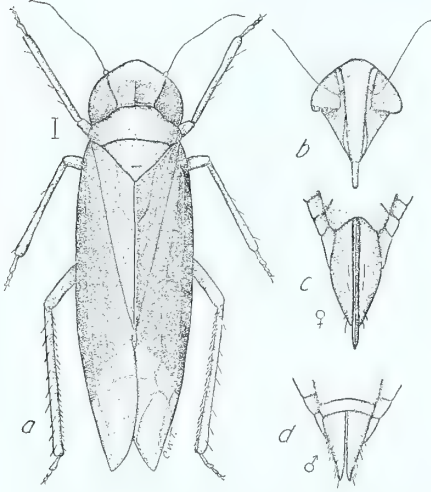
Fauna Brit. India, Rhynchota, IV, p. 400, 1908.

Type *H. insignis*, Dist. Distribution Ceylon.

“Vertex subquadrate, longer than breadth between eyes at base, rounded but very slightly produced in front of eyes, which are almost as long as the vertex and do not project over the anterior angles of the pronotum; face long, broad, narrowing to clypeus which is short and broad; pronotum shorter than vertex, transverse, a little rounded in front, the lateral margins nearly straight; scutellum broad, subtriangular; legs slender, posterior tibiae strongly spinulose and slightly curved; tegmina long, much longer than abdomen, apical cells three, large, and subequal in length.” (Distant.)

33. *Homa upoluana*, n. sp. (Text-fig. 15).

This species appears to be nearly related to *Homa insignis* Distant, but aside from a different colour pattern the vertex is slightly subangulate and apparently not quite so much longer than the pronotum. Vertex is longer than pronotum, faintly subangulate, about one-third longer at middle than next the eye; front narrow tapering gradually to clypeus; clypeus short, apex rounded, lorae elongate, reaching close to margin of cheek. Cheek depressed below the eye; outer margin slightly sinuate; pronotum broadly rounded in front, scarcely concave behind; elytra with three large apical cells, the outer one sessile on transverse veins, wing with submarginal vein and one apical cell.



TEXT-FIG. 15.—*Homa upoluana*, n. sp.: about one-fourth its length. Male, valve *a*, dorsal view; *b*, face; *c*, female, hidden; plates elongate, triangular, narrowed to acute points extending beyond the pygofer. and *d*, male genitalia.

Female, last ventral segment short, truncate; ovipositor extending beyond the pygofer

Colour ivory white, face and lateral margins of pronotum in some specimens and the clavus and corium of elytra and tergum brilliant red. Beneath white or ivory white, abdomen tinged with yellow.

Length: female, 2 mm.; male, 1.75 mm.

Described from sixteen specimens (holotype, allotype, and paratypes): fourteen from Apia, 15.ix.1923, Swezey and Wilder; and two specimens (paratypes), Savaii, Safune, 2.v.1924, Rain Forest, 2,000–4,000 ft., Bryan.

This species evidently belongs to Distant's genus *Homa* and his division of *Empoascaria*, the wing having a definite single cell. He was uncertain of its position and says, "I have included *Homa* in this division, but have very imperfectly seen the wing venation in the unique typical specimen." This record evidently gives a considerable additional range to the genus.

Genus *Erythroneura* Fitch.

Erythroneura Fitch, *Trans. N.Y. State Cab.*, p. 62 (1851).

34. *Erythroneura samoana*, n. sp.

Head narrower than pronotum ; vertex obtusely angulate, three-fourths as long as width at base ; front margins nearly parallel to near the apex, narrowing abruptly to clypeus ; cheek margins slightly sinuate ; pronotum a little longer than the vertex, the hind margins slightly concave.

Female, last ventral segment twice as long as preceding, rounded behind, the strongly curved ovipositor extending distinctly beyond the tip of pygofer. Male, last ventral segment about as long as preceding ; somewhat tubular, valve wanting or hidden ; plates or outer claspers narrow and strongly curved and faintly ciliate.

Colour ivory white tinged with yellowish and in some specimens distinctly tinged with fulvous or orange on the pronotum ; the elytra hyaline suffused with yellow to nearly the cross-veins, an elongate ivory plaque on the costa ; apex hyaline and wings milky hyaline. Beneath pale, tips of tarsi black.

Length : female, 3 mm. ; male, 2.5 mm.

Described from a series of specimens : three female (holotype and paratypes), Savaii, Salailua, 23-v-1924, Bryan ; four male (allotype and paratypes), Savaii, Safune, 13-v-1924, Bryan ; and also specimens referred to this species from Tutuila, Fagasa, 9-9-1923, Swezey and Wilder.

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INSECTS OF SAMOA

AND OTHER SAMOAN TERRESTRIAL ARTHROPODA

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